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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/062,646	01/31/2002	Mao Chen	08CS5966	2152

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EXAMINER

XU, LING X

ART UNIT

PAPER NUMBER

1775

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/062,646

Applicant(s)

CHEN, MAO

Examiner

Ling X. Xu

Art Unit

1775

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 December 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 9-16 and 21-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 17-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2</u> . | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-8 and 17-20, drawn to an anti-fog coating and article, classified in class 428, subclass 428.
 - II. Claims 9-16, drawn to a process for forming an anti-fog film, classified in class 427, subclass 387.
 - III. Claims 21-26, drawn to a process for forming another anti-fog film, classified in class 427, subclass 387.
 - IV. Claims 27-30, drawn to an article, classified in class 428, subclass 428.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case, the process for using the product as claimed can be practiced with another materially different product such as a coating composition comprises a silicone compound containing a sulfonic acid functional group.

Inventions I and III are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the

process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case, the process for using the product as claimed can be practiced with another materially different product such as a coating composition comprises a silicone compound containing a sulfonic acid functional group.

Inventions I and IV are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the Group IV, the combination does not require that the composition comprises the silicone compound free from a sulfonic acid functional group and water. The Group I, the subcombination, has separate utility such as use as molding compositions in order to facilitate release of formed articles following a molding process.

Inventions II and III or IV are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case, Group II is directed to a method which requires coalescing the silicone compound and polyurethane compound in the coating composition to form the film on the substrate while Group III is directed to a method which requires

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crosslinking the coating composition on the substrate and heating the substrate to form the film, and Group IV is directed to an article formed by different method. Accordingly, Group II, III and IV are different inventions.

Inventions III and IV are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be made by another and materially different process such as coalescing the silicone compound and polyurethane compound to form the film.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, the search required for Group I is not required for Groups II-IV, the search required for Group II is not required for Groups III-IV and the search required for Group III is not required for Group IV, restriction for examination purposes as indicated is proper.

During a telephone conversation with Mr. Bob Walter on 12/13/2002, a provisional election was made with traverse to prosecute the invention of Group I, claims 1-8 and 17-20. Affirmation of this election must be made by applicant in replying to this Office action. Claims 9-16 and 21-30 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Specification

2. The disclosure is objected to because of the following informalities: on page 5, line 15, it is unclear what the term "amido" is, in line 16, it is unclear what the term "phophono" is, in line 17, it is unclear if the "combinations comprising at least one of the foregoing moieties" is referred to R20 or R21 being the combinations.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 4-6 and 19-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 4 and 19, line 10, it is unclear what the term "amido" is referred to, in line 11, it is unclear what the term "phophono" is referred to. In line 11, it is unclear if the "combinations comprising at least one of the foregoing moieties" is referred to R20 or R21 being the combinations.

In claim 5, the additives listed are not specifically defined or described in the specification. It is unclear what the additives listed are because the terms used for additive are confusing. For example, some "pigments" may also be the "fillers", the "particulates which control the friction or surface contact areas" or the "defoamers", some "particulates which control the friction or surface contact areas" may also be the

"antistatic agent" or the "corrosion inhibitors", some "fungicidal agents" may also be the "bactericidal agents" or "anticrobial agents". The claim is indefinite because it fails to particularly point out what the additives listed are.

In claim 5, line 4, the term "antistatic agents" has also been listed as "an antistatic agent" in line 2.

In claim 5, line 6, the term "the like" also renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "or the like"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d). It is suggested that the proper Markush group format -- a material selected from the group consisting of -- is used for the claimed additive.

In claim 6, the term "comprising" is used in the Markush group, which is not proper because it is unclear if the combinations also comprise co-solvents other than the solvents listed in the Markush group.

In claim 20, it is suggested that the claim to be changed to -- The article of Claim 17, wherein the substrate is the plastic and the plastic comprises a material... --" because the instant claim while claims the substrate to be the plastic but does not exclude the possibility of the substrate being glass at the same time.

In claim 20, line 3, the term "the like" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "or the like"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d). It is suggested that the proper Markush group format --a material selected from the group consisting of -- is used for the claimed material.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-7 and 17-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Anderson et al. (US 5,932,405).

Anderson discloses a photographic element comprises a support and an outermost protective overcoat layer superposed on the support. The protective overcoat layer comprises a water dispersible siloxane-containing polyurethane (abstract).

Anderson also discloses that the siloxane-containing polyurethane comprises more than 0.25% and less than 25% weight % of the siloxane component (Col. 5, lines 15-30).

With respect to silicone compound recited in claims 3-4 and 18-19, Anderson discloses that the siloxane is a diol or diamine in the preparation of the polyurethane which is represented by general formula listed on Col. 5, lines 1-20. The listed siloxane has the same structure as the claimed siloxane recited in claims 3-4 and 18-19.

With respect to claims 5-6, Anderson discloses that the composition comprising additives (Col. 5, lines 35-67) and co-solvent (Col. 4, lines 53-60). The additives include abrasive particles, charge control surfactants (Col. 6, lines 1-30), and tertiary amines

which are used to neutralize the acid (Col. 4, lines 45-50). The co-solvent includes N-methylpyrrolidone (Col. 4, lines 53-60).

With respect to claim 7, Anderson discloses that the water dispersible polyurethane features the inclusion of siloxane bonds in its molecule (Col. 4, lines 60-67).

With respect to claims 17 and 20, Anderson discloses that the photographic elements comprise various polymeric films and glass (Col. 3, lines 25-33), specifically, the support is made of polymeric films, such as polyester and acetate, or glass (Col. 7, lines 17-25). The protective layer can be served as an outermost backing layer on the support or an outermost layer coated on the top of an abrasion resistance backing layer (Col. 6, lines 30-40).

Accordingly, Anderson meets all the limitations of claims 1, 3-7 and 17-20.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 2 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson et al.

As stated above, Anderson discloses a protective overcoat layer comprises a water dispersible siloxane-containing polyurethane (abstract) and the siloxane-

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containing polyurethane comprises more than 0.25% and less than 25% weight % of the siloxane component (Col. 5, lines 15-30).

Anderson does not specify the concentration of the polyurethane compound and the co-solvent present in the coating composition as recited in claims 2 and 8.

However, Anderson discloses that the composition comprises the same elements including water, co-solvent, polyurethane, additives and the same amount of silicone compound as claimed. Therefore, it would have been obvious to one of ordinary skill in the art to obtain the optimum or workable ranges of the polyurethane compound and co-solvent as claimed through routine experimentation.

Generally, differences in concentration or temperature will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration or temperature is critical. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235(CCPA 1955)

6. Claims 2-3 and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson et al.

Anderson discloses a photographic element comprises a support and an outermost protective overcoat layer superposed on the support. The protective overcoat layer comprises a water dispersible siloxane-containing polyurethane

(abstract). The siloxane-containing polyurethane comprises more than 0.25% and less than 25% weight % of the siloxane component (Col. 5, lines 15-30).

Anderson also discloses that the siloxane is a diol or diamine in the preparation of the polyurethane which is represented by general formula listed on Col. 5, lines 1-20. The listed siloxane has the same structure as some of the claimed siloxane recited in claims 3-4 and 18-19.

Anderson discloses some of the species listed in claims 2-3 and 18-19. Anderson does specify all of the species listed in claims 2-3. However, those species are similar compounds as the disclosed siloxane compounds by Anderson.

Therefore, it would have been obvious to one of ordinary skill in the art to include these species in the Anderson's composition. One skilled in the art would have been motivated to use these compounds with the expectation that compounds similar in structures will have similar properties and utilities, see MPEP 2144.09.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ling X. Xu whose telephone number is 703-305-0395. The examiner can normally be reached on 8:00 - 4:30 Monday - Friday.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah D. Jones can be reached on 703-308-3822. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.


DEBORAH JONES
SUPERVISORY PATENT EXAMINER

Lx



January 31, 2003